STATEMENT OF BASIS
Safeway Store #1614
Denver, Colorado
Remedial Rule Authorization
CO50000-10158

Background

During groundwater treatment for a perchloroethylene (PCE), Safeway, inc. discovered that a sanitary sewer vault and lift station for the Safeway store was not operating correctly. It appeared that sewage had been lost to the shallow water bearing soils beneath the store. On behalf of Don Flori of Safeway Inc., Hirsch & Gibney has filed an application for a Rule Authorization to remediate the contaminated groundwater by injection of oxidant to disinfection the saturated subsurface soils. The application was received on October 15, 2013. A Remediation Plan has been approved by the Colorado Department Public Health and Environment, Hazardous Materials and Waste Management Division.

Location

The map submitted shows that the store is located on the southeast corner of the intersection of 6th Avenue and Corona Street in Denver. Figure 2 included with the application shows the location of the Safeway Store and the proposed injection points in greater detail.

Geology and Hydrology

The sediments underlying this site are composed primarily of fine grained sands to a depth of 9 to 10 feet below ground surface (bgs). Bedrock consists of interbedded claystone and sandstones of the Denver Formation. Groundwater flows in a south direction beneath the site at a depth of approximately 8 feet bgs.

Proposed Remedial Program

Hirsch & Gibney plan to install 2 dry wells and 5 injection points through the basement floor near the sanitary vault/lift station. The dry wells will be constructed by coring the basement concrete, digging out underlying sands to a depth of 18 inches below grade, grouting a 12 inch open ended Schedule 40 PVC casing into the subsurface, and seal the space between the casing and the borehole wall with bentonite/concrete as a seal. The injection points will be constructed through the concrete, pneumatically pressing a well point into the underlying sands to bedrock. These injection points will be sealed using bentonite and concrete slurry. Each of the 7 wells will be completed in a flush mounted well box. The dry wells will be used to decant and percolate a dissolved phase oxidant through the casing into the underlying soils and groundwater. The injection points will be used for injecting oxidant into the underlying soils. The oxidants proposed for use include, sodium hypochlorite disinfection solution whit Johnson Wells NW-410™ Chlorine enhancer and a potassium permanganate solution.

Other Water Users

The groundwater beneath the site is not used for drinking water purposes, potable water is provided by the City and County of Denver. There are no surface water bodies that could be impacted by this remediation.

Recommendation

Since the proposed system can be conducted without endangering human health or the environment, approval of this program as presented in the application is recommended.